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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,534

06/26/2007

Derk Vegter

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EXAMINER

AMRANY, ADI

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

10/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/599,534	VEGTER, DERK	
	<b>Examiner</b>	<b>Art Unit</b>	
	ADI AMRANY	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawing is objected to because the reference numerals are hand drawn. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

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F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-8 and 10-15 are rejected on the ground of nonstatutory double patenting over claims 1- of U. S. Patent No. 7,586,213 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Claims 1-6 recite limitations identical to those of claim 1 in the '213 patent.

Claims 1 and 6-8 recite limitations identical to those of claim 15 in the '213 patent. The "voltage transformer circuit" of pending claims 6- is identical to the "drive circuit" of the '213 patent.

Claims 10-11 recite limitations very similar or identical to those of claims 12, 14, respectively.

Claims 12-15 recite limitations that are identical to those of claims 1 and 15-18 of the '213 patent.

***Claim Objections***

4. Claim 16 is objected to because the claim recites that the method either operates or closes the gas valve. There is no indication in the claim that "operating" means that the gas valve is "opened" (as opposed to being closed).

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 and 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Auer (US 4,118,750), as stated in the art rejections of application 10/599,548 (non-final September 12, 2008; final February 17, 2009).

With respect to claim 1, Auer discloses a fail-safe circuit for a piezo-operated gas valves (abstract; fig 2, items 123-125), comprising: at least one input (131,132) that can be connected to a control device (fig 1, item 102; col. 2, line 46 to col. 3, line 7) and at least one output (connection to 125) that can be connected to a gas valve (obvious), where the fail-safe circuit only supplies an output voltage to open a gas valve to the at least one output if an input signal containing at least two different successive frequency signals is provided by the control device at the input of the fail-safe circuit (fig 3; col. 3, lines 12-37; col. 4, line 67 to col. 5, line 6; col. 5, line 47 to col. 6, line 49).

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Auer discloses that the frequency signals are used to activate “a vital relay.” One skilled in the art would recognize that a piezo-operated gas valve is a vital relay. Further, the limitation that the recited control circuit is “for piezo-operated gas valves” is interpreted as the end use of the device. The Auer failsafe circuit will work the same way regardless of what the relay is designed to open/close.

With respect to claims 2-5, Auer discloses the failsafe circuit includes a charging circuit having at least one capacitor (149A; col. 4, lines 26-28), the charging circuit charging at least one of the capacitors exclusively upon application or presence of a first frequency signal in the input signal. Auer discloses that the capacitor is charged during application of the first frequency signal and discharges during the second frequency signal. With respect to claim 4, Auer figure 3a shows that the second frequency signal has a lower frequency than the first frequency signal (col. 3, line 12-21).

With respect to claims 6-8, Auer discloses a voltage transformer circuit (124) which produces an output voltage to open the gas valve from a supply voltage when the second frequency signal is applied or is present in the input signal (col. 5-6), the voltage transformer has at least one capacitor (149B, 162) that charges when the second frequency signal is present in the input signal (col. 4, lines 26-28; col. 6, lines 27-43), and continues to provide an output voltage to keep the gas valve open for a period of time when the first frequency signal is present in the input signal (col. 6, lines 44-49).

With respect to claim 10, Auer discloses a base frequency range of 600-12000 Hz, while the two signal frequencies about 5% above/below the base frequency. At the time of the invention by applicant, it would have been obvious to one skilled in the art to

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select a different frequency value, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The actual frequency values do not matter, so long as the combination of frequencies do not normally appear in nature (col. 1, lines 66-68).

With respect to claim 11, Auer discloses the first time period is followed by the second time period (fig 3a-b). The claim only appears to only define "successively," and does not actually add any limitations to claim 1.

With respect to claims 12-15, Auer discloses the failsafe circuit, as discussed above in the rejection of claim 1. Claim 12 only differs from claim 1 by not including the limitation that the two frequencies are successive. Dependent claims 13-15 recite limitations directed towards the definition of "successive," which is met by Auer, as discussed above.

With respect to claim 16, Auer discloses the apparatus necessary to complete the recited limitations, as discussed above in the rejection of claim 1. Auer discloses that if the frequencies are not properly applied (i.e. successive), then the gas valve is not operated (col. 6, line 50 to col. 7, line 20).

With respect to claims 17-18, Auer discloses the two frequency signals that are applied for a first/second time (fig 3a-b). Regarding claim 18, it is clear that since each frequency is applied for its own time, it is not applied during the time period of the other frequency.

With respect to claim 19, Auer discloses the charging a capacitor (149a) of the charging circuit during the first period of time and charging a capacitor (162) of a transformer circuit during the second period of time, wherein the voltage across the capacitor of the transformer circuit opens the gas valve (col. 6, lines 44-49), as discussed above in the rejections of claims 2 and 6-8.

With respect to claim 20, Auer discloses that the charging circuit capacitor (149a) is not charged during the second period of time (col. 3, lines 49-58; col. 4, lines 26-28) and using a voltage across the capacitor to activate the transformer circuit during the second period of time. Auer discloses that only capacitor 149a is charged during the first period of time. Since the capacitor is not being charged during the second period of time, it would be obvious to one skilled in the art that it discharges. Claim 20 does not state how the transformer circuit is "activated" by the charging circuit capacitor.

***Allowable Subject Matter***

7. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach or suggest that the voltage transformer circuit has a transistor with the configuration recited in claim 9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADI AMRANY whose telephone number is (571)272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-4pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

10-8-09

/Stephen W Jackson/

Primary Examiner, Art Unit 2836